

Message

**From:** Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]  
**Sent:** 10/8/2020 6:21:26 PM  
**To:** D'Ambro, Emma [dambro.emma@epa.gov]; Offenberg, John [Offenberg.John@epa.gov]; McCord, James [mccord.james@epa.gov]; Riedel, Theran [Riedel.Theran@epa.gov]; Piletic, Ivan [Piletic.Ivan@epa.gov]; Murphy, Benjamin [murphy.benjamin@epa.gov]  
**CC:** Ryan, Jeff [Ryan.Jeff@epa.gov]  
**Subject:** RE: a quick answer please

Thanks Emma.

Very helpful.

Ex. 5 Deliberative Process (DP)

## Ex. 5 Deliberative Process (DP)

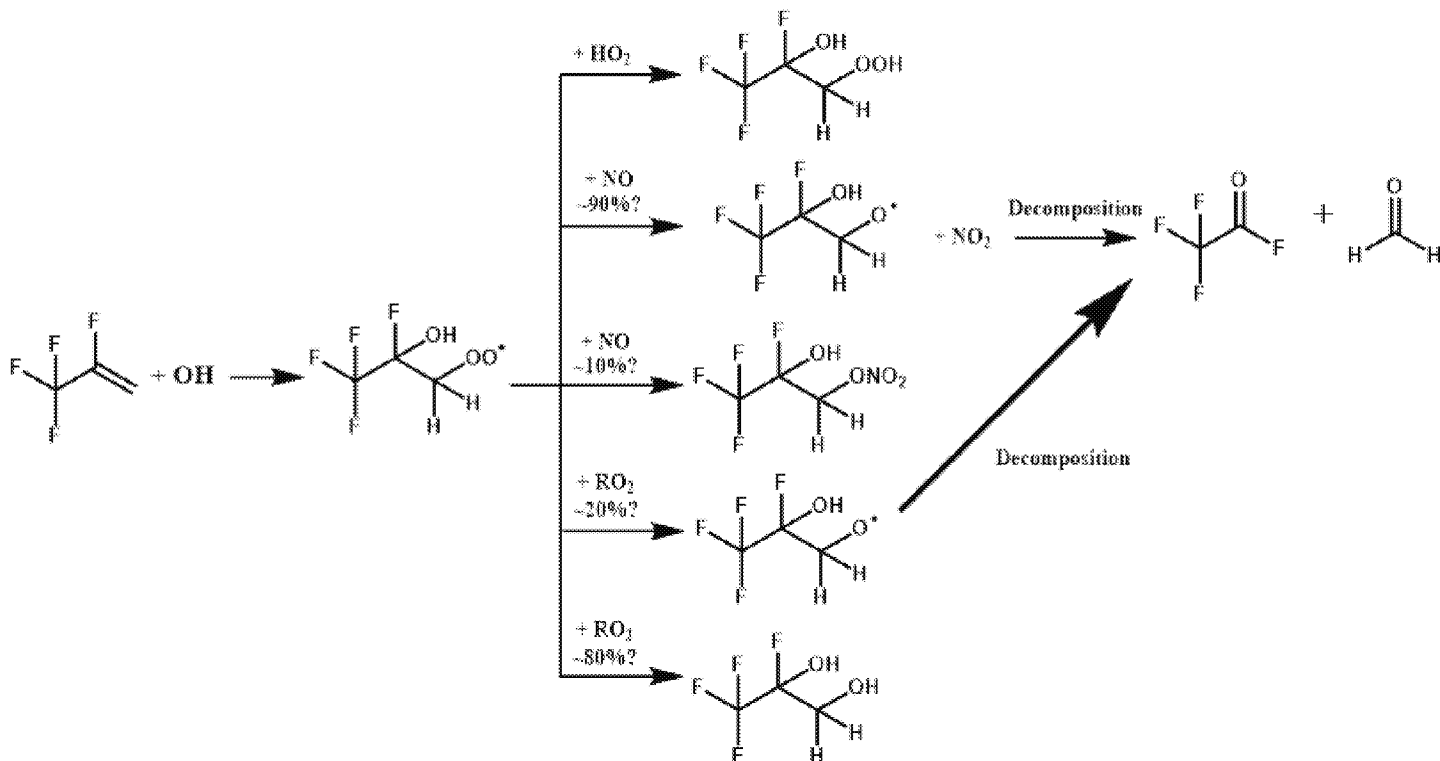
Mark

**From:** D'Ambro, Emma <dambro.emma@epa.gov>  
**Sent:** Thursday, October 08, 2020 1:09 PM  
**To:** Offenberg, John <Offenberg.John@epa.gov>; McCord, James <mccord.james@epa.gov>; Riedel, Theran <Riedel.Theran@epa.gov>; Piletic, Ivan <Piletic.Ivan@epa.gov>; Murphy, Benjamin <Murphy.Benjamin@epa.gov>  
**Cc:** Strynar, Mark <Strynar.Mark@epa.gov>; Ryan, Jeff <Ryan.Jeff@epa.gov>  
**Subject:** RE: a quick answer please

At the suggestion of John, a more complete picture of what we would expect from an atmospheric chemistry standpoint, with heavy caveats especially on the branching ratios that I put there just to give you a rough sense.

## Ex. 5 Deliberative Process (DP)

Obviously if someone sees something I'm overlooking/misconstruing please jump in!



**Emma D'Ambro, Ph.D.**

ORISE Post-Doctoral Fellow

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U.S. Environmental Protection Agency

Research Triangle Park, NC

Email: [dambro.emma@epa.gov](mailto:dambro.emma@epa.gov)

Ph: (919) 541-4803

**From:** D'Ambro, Emma

**Sent:** Thursday, October 8, 2020 11:13 AM

**To:** Offenberg, John <[Offenberg.John@epa.gov](mailto:Offenberg.John@epa.gov)>; McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)>; Riedel, Theran <[Riedel.Theran@epa.gov](mailto:Riedel.Theran@epa.gov)>; Piletic, Ivan <[Piletic.Ivan@epa.gov](mailto:Piletic.Ivan@epa.gov)>; Murphy, Benjamin <[murphy.benjamin@epa.gov](mailto:murphy.benjamin@epa.gov)>

**Cc:** Strynar, Mark <[strynar.mark@epa.gov](mailto:strynar.mark@epa.gov)>; Ryan, Jeff <[Ryan.Jeff@epa.gov](mailto:Ryan.Jeff@epa.gov)>

**Subject:** RE: a quick answer please

Hi John (& Mark),

## Ex. 5 Deliberative Process (DP)

Emma

**Emma D'Ambro, Ph.D.**

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**From:** Offenberg, John <[Offenberg.John@epa.gov](mailto:Offenberg.John@epa.gov)>  
**Sent:** Thursday, October 8, 2020 11:10 AM  
**To:** McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)>; Riedel, Theran <[Riedel.Theran@epa.gov](mailto:Riedel.Theran@epa.gov)>; D'Ambro, Emma <[dambro.emma@epa.gov](mailto:dambro.emma@epa.gov)>; Piletic, Ivan <[Piletic.Ivan@epa.gov](mailto:Piletic.Ivan@epa.gov)>; Murphy, Benjamin <[Murphy.Benjamin@epa.gov](mailto:Murphy.Benjamin@epa.gov)>  
**Cc:** Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>; Ryan, Jeff <[Ryan.Jeff@epa.gov](mailto:Ryan.Jeff@epa.gov)>  
**Subject:** Re: a quick answer please

Adding Emma, Theran, Ivan et al. to include rxns in air.

John Offenberg, PhD  
US EPA / ORD  
919.695.1956

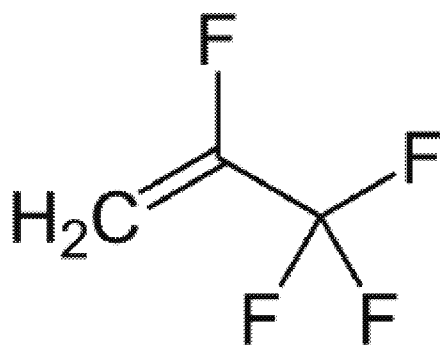
On Oct 8, 2020, at 11:08, McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)> wrote:

I would guess the first degradation product is from the addition of water across the double bond to form HO-CH<sub>2</sub>-CHF-CF<sub>3</sub> with a terminal product transformation to TFA.

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**From:** Strynar, Mark  
**Sent:** Thursday, October 8, 2020 10:24 AM  
**To:** Offenberg, John <[Offenberg.John@epa.gov](mailto:Offenberg.John@epa.gov)>; Ryan, Jeff <[Ryan.Jeff@epa.gov](mailto:Ryan.Jeff@epa.gov)>; McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)>  
**Subject:** a quick answer please

If this compound were to get out into the environment what do we anticipate it would transform into? Honeywell and Chemours call it HFO-1234yf.



<https://en.wikipedia.org/wiki/2,3,3,3-Tetrafluoropropene>

Dr. Mark J. Strynar  
Physical Scientist

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